Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

Listing of Claims

1-17 (Cancelled).

18. (Currently Amended) A dental composition comprising:

a) at least one phosphoric acid ester having at least one substituent with one ethylenically unsaturated moiety, wherein the substituent is bonded to the phosphorous atom;

b) at least one phosphoric acid ester having at least one substituent with two or more ethylenically unsaturated moieties, wherein the substituent is bonded to the phosphorous atom;

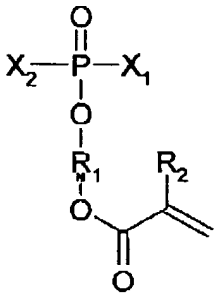
c) at least one initiator; and

d) an additional component selected from unsaturated monomers and unsaturated prepolymers;

wherein the dental composition is a self-etching dental adhesive.

19. (Previously Presented) The dental composition of claim 18, further comprising an additive selected from the group consisting of stabilizers, unsaturated polymers, solvents, fluoride release agents, non reactive inorganic fillers, and photobleachable colorants.

20. (Previously Presented) The dental composition according to claim 18, wherein component (a) is represented by formula (I)



(I)

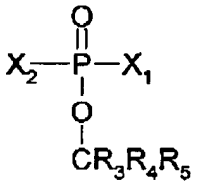
wherein R_1 is selected from the group consisting of (i) an alkylene having 1 to 4 C atoms, (ii) or a bivalent organic group having 1 to 4 carbon atoms composed of two or more hydrocarbon residues bonded to one another by one or more ether or thioether linkages, and (iii) or an aryl, each optionally substituted with OH;

wherein R_2 is H, or CH_3;

wherein X_1 is OH or halogen; and

wherein X_2 is X_1 or $-O-R_1-OOC-CR_2=CH_2$,

and component (b) is represented by formula (II),



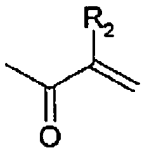
(II)

wherein R_3, R_4, and R_5 are independentaly selected from (i) H, (ii) linear or branched alkyl groups having 1 to 4 carbon atoms, optionally substituted with OH, (iii) aryl groups, optionally substituted with OH, and (iv) organic groups having 5 to 15 carbon atoms composed of 2 to 6 saturated or ethylenically unsaturated hydrocarbon residues bonded to one another by one or more ether, thioether, ester, thioester, thiocarbonyl, amide, urethane, carbonyl and/or sulfonyl linkages, each optionally substituted with OH,

wherein at least 2 of the groups R_3, R_4, and R_5 comprise at least 1 group according to formula (III)

or

at least 1 of the groups R_3, R_4, and R_5 comprises at least 2 groups according to formula (III)



(III)

and wherein $X_2 = X_1$ or $-O-CR_3R_4R_5$ or $-O-R_1-OOC-CR_2=CH_2$.

21. (Previously Presented) The dental composition according to claim 18, wherein component (b) is present in an amount of about 1 to about 500 parts by weight based on about 100 parts by weight of component (a).

22. (Previously Presented) The dental composition according to claim 18, wherein the total amount of components (a) and (b) in the composition is about 10 to about 90 parts by weight.

23. (Previously Presented) The dental composition according to claim 18, wherein the prepolymer is present in an amount of about 0 to about 30 parts by weight.

24. (Previously Presented) The dental composition according to claim 23, wherein the prepolymer does not contain any hydroxy, acidic or ionic groups.

25. (Previously Presented) The dental composition according to claim 23, wherein the prepolymer has an Mw in the range of about 600 to about 20000.

26. (Previously Presented) The dental composition according to claim 18 having a contact angle versus deionized water of more than 15°, if the composition is cured in the presence of air, and of more than 50°, if the composition is cured in the absence of air.

27. (Previously Presented) The dental composition according to claim 18 having an adhesion to enamel and/or dentin in the range of about 2 to about 15 MPa.

28. (Previously Presented) The dental composition according to claim 18 having a water uptake of less than 5 % by weight with respect to the cured composition measured after having immersed the composition for 5 h in water of 37°C.

29. (Previously Presented) The dental composition according to claim 27 having an enamel adhesion of at least 5 MPa.

30. (Previously Presented) The dental composition according to claim 18, wherein component (a) is selected from the group consisting of 2-methacryloyloxyethyl phosphate, 2-methacryloyloxypropyl phosphate, 3-methacryloyloxypropyl phosphate, 2-methacryloyloxybutyl phosphate, 3-methacryloyloxybutyl phosphate, 4-methacryloyloxybutyl phosphate, 5-methacryloyloxy-3-oxa-pentyl phosphate, bis(2-methacryloyloxyethyl) phosphate, bis(2-methacryloyloxypropyl) phosphate, bis(3-methacryloyloxypropyl) phosphate, bis(2-methacryloyloxybutyl) phosphate, bis(3-methacryloyloxybutyl) phosphate, bis(4-methacryloyloxybutyl) phosphate, bis(5-methacryloyloxy-3-oxa-pentyl) phosphate, and mixtures thereof.

31. (Previously Presented) The dental composition according to claim 18, wherein component (b) is selected from the group consisting of glycerol-1,3-dimethacrylate-2-phosphate, glycerol-1,2-dimethacrylate-3-phosphate, bis(glycerol-1,3-dimethacrylate) phosphate, bis(glycerol-1,2-dimethacrylate) phosphate, (glycerol-1,2-dimethacrylate),(glycerol-1,3-dimethacrylate) phosphate, (trimethylolpropane dimethacrylate) phosphate, bis(trimethylolpropane

dimethacrylate) phosphate, (trimethylolethane dimethacrylate) phosphate, bis(trimethylolethane dimethacrylate) phosphate, pentaerythritol trimethacrylate phosphate and mixtures thereof.

32. (Currently Amended) A method for preparing a dental composition comprising the step of mixing the following ~~following~~ components:

a) at least one phosphoric acid ester having at least one substituent with one ethylenically unsaturated moiety wherein the substituent is bonded to the phosphorous atom,

b) at least one phosphoric acid ester having at least one substituent with two or more ethylenically unsaturated moieties, wherein the substituent is bonded to the phosphorus atom,

c) at least one initiator; and

d) an additional component selected from unsaturated monomers and unsaturated prepolymers.

33. (New) The dental composition according to claim 22, wherein the total amount of components (a) and (b) is in a range of about 30 to about 70 parts by weight.

34. (New) A dental composition comprising:

a) at least one phosphoric acid ester having at least one substituent with one ethylenically unsaturated moiety, wherein the substituent is bonded to the phosphorous atom;

b) at least one phosphoric acid ester having at least one substituent with two or more ethylenically unsaturated moieties, wherein the substituent is bonded to the phosphorous atom;

c) at least one initiator;

d) an additional component selected from unsaturated monomers and unsaturated prepolymers; and

e) a solvent in an amount of 1 wt-% to 15 wt-%, wherein the solvent comprises water.

35. (New) A dental composition comprising:

a) at least one phosphoric acid ester having at least one substituent with one ethylenically unsaturated moiety, wherein the substituent is bonded to the phosphorous atom;

b) at least one phosphoric acid ester having at least one substituent with two or more ethylenically unsaturated moieties, wherein the substituent is bonded to the phosphorous atom;

c) at least one initiator; and

d) an additional component selected from unsaturated monomers and unsaturated prepolymers;

wherein component (b) is present in the composition in an amount of about 150 to about 250 parts by weight based on about 100 parts by weight of component (a).